

REMARKS

This is a response to the office action mailed on 9/10/03. Claims 1 and 3 have been amended. Claim 7 has been canceled. Claim 34 has been added. Applicants believe that the amended claim 1 is supported by original claims 1 and 7. Amended claim 3 finds support, for example, in the original claim 3. New claim 34 is supported by the description on page 26, lines 4-7 and page 28, lines 4-10 of the specification.

Claims 1-8 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Bugner et al. (U.S. Patent No. 5,985,017) ("Bugner") in view of Sano et al. (U.S. Patent No. 5,324,349) ("Sano"). Applicants respectfully submit that neither Bugner nor Sano, alone or in combination, disclose the claimed invention. Bugner discloses an ink jet comprising a pigment (col. 4, lines 1-47), and a dispersion comprising a pigment (col. 9, lines 19-20). However, Bugner does not disclose that the dispersion comprises, in addition to the pigment particles, a pigment derivative having a polar group.

The Examiner states in paragraph 4 of the office action "Bugner teaches a dispersant in ink jet inks comprising pigment #6 (col. 9, lines 19-20) and a surfactant (col. 6, lines 28-31) in an aqueous medium (col. 6, lines 8-10). The preferred pigments have known chemical structures displaying polar groups attachments (col. 4, lines 38-47)...." However, none of the pigments disclosed in col. 4, lines 38-47, which the Examiner refers to, have a polar group. The pigments disclosed in col. 4, lines 38-47 are not the pigment derivatives having a polar group as claimed. Sano does not cure this deficiency. Accordingly, Claim 1 is patentably allowable over the combination of the cited references. Claims 2, 3, 4, 5, 6, and 8 depend from claim 1 and are allowable for at least the same reason. Claim 7 has been canceled.

Moreover, the present invention provides pigment ink with improved glossiness, minimized ink head nozzle clogging, and minimized bronzing (as disclosed on page 4, last line to page 5, line 6, and on page 96, lines 8-16 of the specification). There is no description or

suggestion in the combination of the references that such improvements can be achieved.

Therefore, *prima facie* case of obviousness cannot be maintained. Regardless, Applicants are submitting herewith a declaration filed under 37 C.F.R. § 1.132 to show unexpected results.

Additional comparative tests were carried out employing Bugner examples. As is apparent from Tables 103 and 104 of the declaration, inventive pigment inks, comprising the inventive pigment dispersion liquids comprising pigment particles falling within the claimed scope and the pigment derivative, provide good resistance to nozzle clogging during ink jetting, and images with minimized bronzing and good glossiness, as compared with comparative pigment ink Nos. 302 and 303, comprising comparative pigment dispersion liquids comprising pigment particles falling within the claimed scope but no pigment derivative or comparative pigment ink No. 304, comprising comparative pigment dispersion liquid comprising both pigment particles falling outside the claimed scope and the pigment derivative. These results are unexpected to one having ordinary skill in the art. In view of the above, it would not have been obvious to one of ordinary skill in the art to make the combination as suggested by the Examiner.

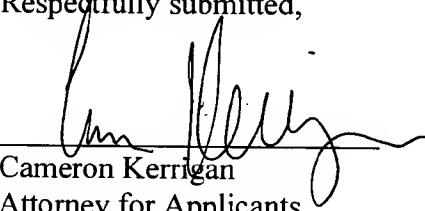
CONCLUSION

Applicants respectfully request prompt examination and allowance of the claims. If the Examiner has any questions or concerns, the Examiner is invited to telephone the undersigned attorney at (415) 954-0323.

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